

Tip sheet: Donning and doffing personal protective equipment (PPE) for droplet and contact precautions during COVID-19¹





Purpose: Healthcare practitioners can reference this document to review best practices for donning and doffing PPE for droplet and contact precautions during COVID-19.

What are droplet and contact precautions?²

Droplet and contact precautions are specific procedures that are followed in addition to routine practices³ for patients/residents that are known or suspected to have an infection that may be transmitted by large infectious droplets or by contact, respectively.

What are the recommendations for droplet and contact precautions?

In addition to routine practices, droplet and contact precautions should be used for all procedures with probable, suspected or confirmed COVID-19 cases. These precautions include proper use of:

- | | |
|---|---|
| 1

Surgical/
procedure mask | 2

Eye protection
(e.g., face shield or
goggles) |
| 3

Isolation gown (e.g.,
Level 2 disposable or
reusable gown) | 4

Pair of gloves |

This document provides guidance on proper PPE use for droplet and contact only. Aerosol generating medical procedures (AGMPs) will require additional precautions (see AGMPs PPE tip sheet). For all procedures, it is recommended that you have a spotter with you to assist you with donning and doffing.

Please note: For every patient and/or patient environment encounter, always apply the Four Moments for Hand Hygiene (i.e., before initial patient/patient environment contact; before aseptic procedure; after body fluid exposure risk; after patient/patient environment contact).

¹This content has been adapted from a live webinar tutorial on protected code blues and managing acutely ill patients with COVID-19 presented by Dr. Natalie Wong and Dr. Alberto Goffi. This webinar can be found here: <https://vimeo.com/408056371>

²Ontario Agency for Health Protection and Promotion, Provincial Infectious Diseases Advisory Committee. Routine Practices and Additional Precautions in All Health Care Settings. 3rd edition. Toronto, ON: Queen's Printer for Ontario; November 2012.

³Public Health Ontario outlines routine practices as "infection prevention and control practices to be used with all clients/patients/residents during all care, to prevent and control transmission of microorganisms in all health care settings." These practices include performing routine risk assessments and hand hygiene.

Protocol for donning (i.e., putting on) personal protective equipment (PPE)^{4,5} for droplet and contact precautions during COVID-19

Step	Considerations
1. Remove all personal items	<ul style="list-style-type: none"> • Prior to entering the patient room, ensure all personal items such as stethoscopes and ID badges are removed. • Everything that you enter the room with needs to stay in the room or be formally de-contaminated upon exit.
2. Perform hand hygiene	<ul style="list-style-type: none"> • Perform hand hygiene for a minimum of 15 seconds (or as recommended at your institution). • Hand hygiene protocols should be the same as a surgical wash; wash hand surface, back, in between fingers, along each finger (including nails) one at a time, and then wrists.
3. Apply surgical mask⁶	<ul style="list-style-type: none"> • Please refer to the following protocol to guide your surgical mask application: <ol style="list-style-type: none"> 1. Remove your glasses if you wear them. 2. Pick up the surgical mask by holding the ties/straps of the mask. Ensure that the blue side of the surgical mask is facing out, away from your body, and the thin metal wire is on the top. 3. Place the thin metal wire along the bridge of your nose. 4. If using a surgical mask with ties, secure the two upper ties behind your head with a bowtie for easy removal. If using a surgical mask with elasticised straps, secure one of the straps behind one of your ears. 5. If using a surgical mask with ties, grab the bottom two ties and pull the mask tight so that it falls underneath your chin. If using a surgical mask with elasticised straps, use the remaining unsecured strap to pull the mask across your face, ensuring that the bottom of the mask falls underneath your chin. 6. Secure the two bottom ties behind your neck using a bowtie, or secure the remaining strap behind your other ear. 7. If using a surgical mask with ties, make sure that the bottom tie is level to the neck, and the top tie is at the crown of your head above the ears. 8. Mold the thin metal wire to the shape of your nose. 9. Put on your glasses if you wear them. • Please remember that your hands/gloves and the outside of your mask are considered contaminated, and therefore it is critical that you perform hand hygiene before and after touching your mask. Avoid touching your mask whenever possible.
4. Perform hand hygiene	<ul style="list-style-type: none"> • This is always important, but especially so if you are reusing a mask. • Perform hand hygiene as outlined in step 2 for a minimum of 15 seconds (or as recommended by your institution).
5. Put on eye protection	<ul style="list-style-type: none"> • Apply the goggles or face shield and adjust the strap for a snug fit. • If using a face shield, the protective band at the top of the face shield should rest in the middle of your forehead. The application process depends on the face shield your institution uses.

Step	Considerations
6. Put on protective gown	<ul style="list-style-type: none"> • A level 2 gown or a reusable gown is acceptable for most droplet and contact precautions. If you are performing a procedure with high risk of fluid splash, a higher level of protection (e.g., level 4 gown) may be necessary. • Have a spotter help you put the gown on. • For tall individuals with broad shoulders, ensure that the gown is not pulled too tightly when tying the strings. These individuals can also consider using a larger sized gown. • Ensure that the gown is covering as much area as possible on your back. • Tie both the neck and waist straps in a bow that will be easy to untie during doffing. Different models of gowns will have ties in different areas (e.g., at the sides instead of the back).
7. (Not essential for most procedures) Put on bonnet	<ul style="list-style-type: none"> • Ensure that the bonnet covers your ears.
8. Put on gloves	<ul style="list-style-type: none"> • Pull the sleeves of the gown down to the level of your knuckles and then put on gloves making sure your wrists are covered. • Do not double glove unless you are performing a procedure with high risk of contamination (e.g. intubation). The purpose of double gloves is not to further protect you, but to protect the environment and those around you.
9. Perform a final check	<ul style="list-style-type: none"> • Before entering room, ask your spotter to do a final check to ensure that your PPE is on properly. Ideally, do a 360 degree turn.

⁴Please note that this is the sequence used at St. Michael's Hospital. Other institutions may recommend applying the gown prior to your face protection, as outlined here: <https://www.cdc.gov/coronavirus/2019-ncov/hcp/using-ppe.html>

⁵In addition to the webinar content, this process was informed by: Public Health Ontario. Technical Brief: IPAC Recommendations for Use of Personal Protective Equipment for Care of Individuals with Suspect or Confirmed COVID-19. Toronto, ON: March 3 2020.

⁶This item was not informed by the webinar content, but by Alberta Health Services, Infection Prevention & Control. Contact and Droplet Precautions. AB; July 2018.

Protocol for doffing (i.e., taking off) PPE⁷ for droplet and contact precautions during COVID-19:

Step	Considerations
1. Communicate that you are ready to doff with your spotter	<ul style="list-style-type: none"> • Tell your spotter that you are ready to doff the PPE and ask them to confirm that there is no breach to protection. • If you do not have a spotter, take a pause inside the room and “mentally rehearse” the PPE doffing process that you need to do.
2. Identify where to doff your PPE items	<ul style="list-style-type: none"> • Doff your body PPE inside of the room, away from the patient near the garbage. • Doff your facial and head PPE outside of the room, either in the antechamber (for a negative pressure room) or outside of the room.
3. (If using a gown model with a front or side tie) Untie the front of the gown (i.e., the ‘belt’)	<ul style="list-style-type: none"> • Using gloved hands, untie the front of the gown as this has been contaminated. If your gown model has a tie on the back, you will wait and untie <i>after</i> the removal of your gloves (step 6).
4. Remove gloves using glove-to-glove, skin-to-skin technique	<ul style="list-style-type: none"> • Please follow these steps to adhere to the glove-to-glove, skin-to-skin technique: <ol style="list-style-type: none"> 1. Make a cuff. i.e., with your non-dominant gloved hand, lift the outside of the gown on your dominant side and fold up the glove to make a cuff. 2. Using your dominant, gloved hand with the cuff, remove the glove on your non-dominant hand by pulling it inside out. Dispose glove straightly into the garbage. 3. Take your now bare hand and insert a finger under the cuff you have created on your dominant hand. Pull off the glove inside out. Dispose glove into the garbage.
5. Perform hand hygiene	<ul style="list-style-type: none"> • Perform hand hygiene for a minimum of 15 seconds (or as recommended at your institution) as previously described.
6. Remove gown	<ul style="list-style-type: none"> • Have your spotter untie the tie(s) at the back of your gown after they have removed their gloves and performed hand hygiene (i.e., steps 4 and 5). • If you are alone, make a wide movement to bring your arms back to untie. Make sure that you do not touch your face and neck. • Perform hand hygiene. • Lean forward and pinch the inside of your gown near the tie. Begin to pull the gown off your body inside out. As you are removing the gown, roll it into a ball with the contaminated side on the inside to avoid it touching your scrubs. • If you are using a Level 2 gown, dispose in garbage, If you are using a reusable yellow gown, put the gown into the appropriate pink bag.
7. Perform hand hygiene	<ul style="list-style-type: none"> • Perform hand hygiene for a minimum of 15 seconds (or as recommended at your institution) as previously described.

Step	Considerations
8. <i>(Not essential for most procedures)</i> Remove bonnet	<ul style="list-style-type: none"> Bonnet can be removed inside or outside of the room. Lean forward, pinch the top of the hat and pull. Put it into the garbage immediately.
9. Perform hand hygiene	<ul style="list-style-type: none"> Perform hand hygiene for a minimum of 15 seconds (or as recommended at your institution) as previously described.
10. Open the door and leave the room	<ul style="list-style-type: none"> N/A.
11. Perform hand hygiene	<ul style="list-style-type: none"> Perform hand hygiene for a minimum of 15 seconds (or as recommended at your institution) as previously described.
12. Remove face shield	<ul style="list-style-type: none"> Lean forward with eyes forward and chin up. Grab the face shield strap. If discarding, drop it in the garbage. If reusing, follow your recycling policy. Unity Health Toronto has guidance on how to clean and store your face shield, which can be accessed here: https://covid.unityhealth.to/wp-content/uploads/2020/05/Cleaning-Storing-Face-Shield_20200505_1600-FINAL.pdf
13. Perform hand hygiene	<ul style="list-style-type: none"> Perform hand hygiene for a minimum of 15 seconds (or as recommended at your institution) as previously described.
14. Remove glasses if you have them	<ul style="list-style-type: none"> Consider having a pair of glasses specifically for the hospital if feasible. Clean your glasses if you are concerned about contamination. This typically would not be necessary unless there was considerable risk of splashing. When finished, put glasses in your scrub pocket instead of on any surfaces.
15. Perform hand hygiene	<ul style="list-style-type: none"> Perform hand hygiene for a minimum of 15 seconds (or as recommended at your institution) as previously described.
16. Remove surgical mask	<ul style="list-style-type: none"> Lean forward with eyes looking forward and chin up. Touch only the ties/straps. Avoid touching the exterior surface of the mask. If using a surgical mask with ties, untie the bottom ties first, then proceed with untying the upper ties. If using a surgical mask with elasticised straps, remove straps from behind both of your ears at the same time. Complete all actions with a slow and controlled motion. Either discard of the mask or follow your recycling strategy.
17. Perform hand hygiene	<ul style="list-style-type: none"> Perform hand hygiene for a minimum of 15 seconds (or as recommended at your institution) as previously described.

⁷In addition to the webinar content, this process was informed by: Public Health Ontario. Technical Brief: IPAC Recommendations for Use of Personal Protective Equipment for Care of Individuals with Suspect or Confirmed COVID-19. Toronto, ON: March 3 2020.